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(6) A Systems Analysis of a Self-Paced, Variable-Length Course of Instruction.

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Prepared for

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Final Report

A Systems Analysis of a Self-Paced, Variable-Length Course of Instruction

by

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Harold Wagner, and Morris Showel

HumRRO Division No. 1 (System Operations)
Alexandria, Virginia

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Prepared for

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BACKGROUND

The Basic Army Administrative Course (BAAC) trains enlisted personnel for the 71B10/20 MOS (Clerk-Typist). The BAAC Course is one of the largest self-paced, variable-length programs conducted by the Army. The students are taught primarily by the use of programmed instructional texts (PI), and, within limits, can progress through the course at their own rate.

The 71B10/20 course is scheduled to revert to a fixed-length course lasting seven weeks. Before this change becomes effective, it was deemed desirable to examine the course to identify its good and poor pedagogical and administrative features.

OBJECTIVES

The objectives were to obtain information about an operationally effective, self-paced, variable-length course; to identify the strengths and weaknesses of the 71B10/20 course as they existed during the Summer and Fall of 1973; and to develop suggestions for increasing the effectiveness of the course.

PROCEDURES

An extensive questionnaire covering a variety of features of the 71B10/20 course was administered to one class of students at Fort Ord and one class at Fort Jackson. A similar questionnaire, plus a structured interview, was administered to course instructors at these two Training Centers. In addition, structured interviews were conducted with course dropouts, and with Training Company and Battalion/Brigade personnel charged with administration of the 71B10/20 course.

The training records of the two classes were analyzed and related to student pre-course and within-course academic and performance characteristics. Also, disciplinary problems associated with 10 consecutive classes of 71B10/20 students were compared with comparable classes of students attending the 76A10 (Supplyman) course at Forts Ord and Jackson.

RESULTS

The detailed findings are reported in two annexes to this report. Annex A describes (a) instructor opinions and practices related to the 71B10/20 course; (b) course-related opinions and suggestions obtained from Training Company and Battalion/Brigade administrative personnel; and (c) a comparison of disciplinary problems associated with the 71B10/20 and 76A10 (Supplyman) courses at Forts Ord and Jackson. Annex B contains (a) a comparison of student and instructor opinions about various features of the course; (b) a discussion relating pre-course academic potential and typing skill to course performance; (c) a discussion relating performance early in the course to overall course performance; and (d) a description of an equation for predicting the time it will take a particular student to complete the course. This report integrates the findings reported in the Annex A and B reports, and suggests ways for improving the 71B10/20 course.

The major findings were as follows:

General

1. The 71B10/20 course is capable of training large numbers of clerk-typists effectively. However, the course does contain flaws, some of which seem amenable to immediate attention.

2. There were no discernible differences between students at Fort Ord and Fort Jackson in end-of-course performance. However, at both installations, women students out-performed men students.

3. Strictly speaking, the course is not a self-paced one. Rather, considerable pressure is placed on students to complete the course PIs and to increase their typing speed in accordance with locally suggested progress rates. Students are free to exceed the expected rate of progress, but not to fall below it by too great a degree.

Course Dropouts

1. By the end of the first week many students who must eventually be dropped from the course have developed poor attitudes towards the course. Primarily this seemed due to an inability to learn how to type. The study findings suggest that by the end of the first week, or even at the end of the first day, it is possible to predict rather accurately those students who will not be able to learn how to type.

2. Procedures for handling potential academic dropouts early in the course are unclear and depend on local policy. At Fort Jackson all students are given a minimum of two weeks to demonstrate their capability to learn how to type. At Fort Ord many students are given only one week to demonstrate this capability.

Incentives

1. Student comments about course incentives suggested that more attention should be given to immediate-impact rewards, such as three-day passes and fewer details, rather than to delayed-impact rewards, such as a grade promotion at the end of training.

2. Many course instructors were unhappy with and unclear about their role as an instructor in a self-paced course. Course administrators tended to believe that the role of an instructor in a self-paced course is that of a classroom monitor. The study findings suggest that this is not quite so. Rather, cadres of specially trained academic counselors, remedial trainers, and student testers, seem to be required. In addition, many instructors reported they felt neglected, seldom rewarded, and that it made little difference to anyone whether they were effective or ineffective as instructors.

3. The students are under a dual reward system, one administered by the Training Company and one administered by the School. Occasionally, this leads to conflicts. For example, the School may award a three-day pass to a student but the student's Training Company may not honor the pass.

Material Update Procedures

1. Procedures for updating obsolete portions of the 71B10/20 course material were not working well. The instructors reported that, at times, considerable portions of the 71B10/20 course were obsolete, and that satisfactory procedures did not exist for updating course material.

Remedial Training Procedures

1. Remedial training, conducted when a student fails a portion of an end-of-course test, tended to be haphazard and based on little or no feedback from the EOC test committee.

Methods of Instruction

1. Many instructors, and a considerable number of students, suggested that platform instruction should be incorporated into portions of the BAAC course.

Course Improvement

1. Frequently mentioned student suggestions for improving the PI material included: (a) eliminate or shorten some PIs; (b) provide a glossary of terms for each PI; (c) re-format the PI material to make it easier to read; (d) try to make the PI material more interesting; and (e) try to make the PI material more job relevant.

SUGGESTIONS

Some of the more important suggestions contained in this report relate to the following:

(1) The development of training material to teach students how to update PI material.

(2) The possibility of not accepting students who cannot type 5 NWPM at entry into the course.

(3) The possibility of dropping from the course at the end of the first week those students who cannot type 7-8 NWPM.

(4) The reorganization of the BAAC Course instructor staff in order to create instructor specialist positions.

(5) The possibility of rewarding progress of students during the course on the basis of their ability to exceed a predicted rate of performance determined by pre-course tests plus performance rate during the first course week.

(6) The possibility of substituting immediate impact rewards (three-day passes, for example) for delayed-impact rewards such as an end-of-course promotion.

PREFACE

This report describes the results of a systems analysis of a self-paced, variable-length course of instruction, the Basic Army Administrative Course (BAAC). Graduates of the course are awarded MOS 71B10 or 71B20.

The detailed findings of the study are described in two report annexes. This report integrates the findings contained in the annexes, and presents suggestions for how the Basic Army Administrative Course might be improved. The data were obtained at Fort Jackson, South Carolina and Fort Ord, California during September 1973.

The Program Director for the project was Dr. C. Dennis Fink of HumRRO's Division No. 1 (Systems Operation). The Director of Division No. 1 is Dr. J. Daniel Lyons. The data from Fort Jackson were collected by Dr. Richard D. Behringer and Dr. Harold Wagner of Division No. 1; the data from Fort Ord were collected by Dr. Morris Showel of the HumRRO Western Division, Presidio of Monterey, California.

Courteous and extensive assistance was provided by BAAC instructors and school administrators at Fort Ord and Fort Jackson.

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OBJECTIVES

The primary objective of this study was to obtain various types of information about an operationally effective, self-paced, variable-length course—information which would prove useful when developing similar courses in the future. A second study objective was to identify disciplinary problems that may be associated with variable-length courses of instruction. The vehicle for this study was the U.S. Army's Basic Army Administration Course (BAAC).

GENERAL CHARACTERISTICS OF THE
BASIC ARMY ADMINISTRATION COURSE

The BAAC trains enlisted personnel for MOS 71B10/20 (Clerk-Typist). Graduates of this course may attend any of a number of follow-on courses, each of which prepares persons for a clerically related position. The 71B10/20 course is one of the largest self-paced, variable-length courses in the Army's Advanced Individual Training (AIT) program. The students are taught primarily by the use of programmed texts and, within certain limits, can progress through the course at their own pace.

The BAAC courses studied in this project were conducted at Fort Ord, California and Fort Jackson, South Carolina. Although local variations in the course administrative procedures exist, important procedures at each installation follow Army Subject Schedule 12-70A10, MOS Technical Training of Clerk-Typist MOS 71B10.

Before entering the course, each student is administered a typing examination. On the basis of entry-level typing speed and accuracy, each student is assigned to one of three course tracks—a non-typist track (Group IV), an intermediate typist track (Group III), or an expert typist track (Group II).

Students who cannot type at a speed of 10 Net Words Per Minute (NWPM) are considered non-typists and are assigned to the Group Typing (Group IV) section of the course. At Fort Ord this section is conducted through the use of closed circuit TV. At Fort Jackson civilian instructors are used in lieu of TV tapes.

A student is allowed a maximum of two weeks to get through the Group Typing section of the BAAC course. During the first week students are taught the basic fundamentals of typing—the use of typewriter controls, the location of "home keys," and proper finger movements. They are guided through a series of exercises teaching them how to properly strike each individual key, and progress to typing groups of letters, groups of words, and finally, sentences and paragraphs.

After the first few days of Group Typing, a daily record is made of each student's typing speed and accuracy. This record is obtained by "timed writings," five-minute test periods during which the student types as rapidly and accurately as possible. The student's typing rate is determined by calculating the number of words typed during the timed writing test (a word is defined as five keystrokes); from this typing rate score, five words are subtracted for each error. Thus, a student who typed 100 words in five minutes, 10 of which contained a single error or mis-strike, would obtain a timed writing score of 10 NWPM.

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At Fort Jackson, those students who can type 10 NWPM or more by the end of the first week of Group Typing are advanced to the next section (Group III) of the course—the self-instruction, self-paced section. Those students who can type seven to nine words per minute are given an additional week of typing practice in order to bring their speed up to over 10 NWPM. Those students who cannot type at least 7 NWPM are usually dropped from the course.

At Fort Ord, Group Typing is divided into two parts, each lasting one week. The first week consists of group instruction by means of video tapes. The second week is self-paced. Instructors are present to monitor classroom activities but they do not function as instructors per se. Whenever the student consistently attains 15 NWPM for three timed writings, he is moved out of Group Typing and proceeds with the rest of the course. If however, he does not reach this goal within two weeks but can type 10 NWPM at the end of this period, he is still moved out of Group Typing and allowed to continue in the course. Students who cannot reach 10 NWPM by this time are dropped from the course.

The intermediate typist track (Group III) of the BAAC Course is for students who can type more than 10 but less than 20 net words per minute. Students can be directly assigned to this track, or they can advance to it upon successful completion of the Group Typing portion of the course. Group III students are assigned various typing exercises designed to increase their speed up to at least 20 NWPM. The student must reach this speed before becoming eligible for receipt of MOS 71B10.

To complete the requirement for MOS 71B10, the student must successfully pass an End-of-Course (EOC) examination covering eight of the nine programmed instruction (PI) texts. There is a standard sequence for studying this instructional material. The student is free, within limits, to study each PI at his own rate. The student studies a PI until he feels prepared to take the criterion test, at which time he informs the instructor and is issued the test. After completing the test, the student returns the answer sheets to the instructor.

When possible, the instructor immediately grades the criterion test and reviews the results with the student. If the student made only a few minor errors on the test material, he may be retested at once by the instructor. That is, the instructor may query the student as to why he made the test errors. If the student shows an understanding of his error and has learned what the correct response should have been, the instructor has the option of passing him for that criterion test. If the student's test results indicate that he has not learned or has misinterpreted the instructional material, he is asked to restudy the programmed text and then to take the criterion test a second time.

Some skilled students are able to type at or beyond 20 NWPM at entry into the course, and are assigned to an accelerated track (Group II). Most of their course time is devoted to study of the programmed text material. They practice typing on occasion to maintain their speed and accuracy.

Within a few weeks, most students have increased their typing speed to 20 or more NWPM and have successfully passed the criterion test for all course PIs. At Fort Jackson, each student is individually sent to an End-of-Course Test Committee, a special group of instructors who administer an End-of-Course typing test to the student. At Fort Ord the typing tests are administered by a Typing Committee. At both installations, the student takes an End-of-Course test covering the eight programmed texts studied in the course. The examination is scored by an EOC testing instructor who reports the scores to the student and to the appropriate instructional cadre.

If the student has successfully passed all portions of the EOC test, he is recommended for graduation from the course. If the student fails one or more portions of the test, he returns to the classroom setting for special remedial instruction and study on the failed portions of the test.

Because of the self-paced, variable-length feature of the BAAC course, certain students, particularly those who are skilled typists at entry into the course, may complete the course in only a few days. To receive MOS 71B10, these students must pass the criterion and End-of-Course tests associated with each of the programmed texts developed for the 71B10 course.

Some students have an enlisted commitment for MOS 71B20. To obtain this MOS, four advanced instructional units must be studied and an EOC test covering their contents must be passed; in addition, the student must type at least 30 NWPM on an EOC typing test. Those students who cannot meet these criteria usually graduate with MOS 71B10.

METHODOLOGY

The data for this study were obtained primarily through the administration of a series of questionnaires and structured interviews with samples of students, instructors, and administrative personnel. A questionnaire was administered to 368 students attending the BAAC courses at Forts Jackson and Ord during the summer and fall of 1973. Questionnaires also were administered to 34 recent dropouts from the BAAC course. In addition, a sample of students attending the course plus all available course dropouts were interviewed in depth.

A detailed instructor questionnaire was administered to 31 and 15 instructors, respectively, at Fort Ord and Fort Jackson. A total of 18 of these instructors were then interviewed in depth.

At both Fort Ord and Fort Jackson a specially devised structured interview was used to obtain information from a sample of permanent party personnel assigned to the BAAC training company. Also, at both installations, a structured interview was administered to selected administrative personnel from those training battalions/brigades which support the BAAC course.

Details about the contents of the data collecting instruments and the administrative procedures utilized in this study are contained in the methodology section of the two Annexes to this report. Copies of the data collecting instruments used are included in these Annexes.

FINDINGS

This report section contains an integrated summary of the detailed findings presented in the two Annexes to this report.

The methodology of this study was such that most comments obtained were destined to be complaints. As a result, the study findings might be perceived as presenting a highly critical view of the BAAC course; however, this is definitely not the case. The course is acceptable as it now is, but it can be improved. The BAAC courses at both Fort Ord and Fort Jackson are operationally effective. They turn out large numbers of well-prepared graduates. The instructors, students, administrative personnel, and even many of the course dropouts interviewed during the project often commented favorably about the course. A summary of the various comments provided by the study respondents can be found in the Appendices to Annex A.

ANALYSIS OF BAAC COURSE DISCIPLINARY PROBLEMS

The Basic Army Administration Course, because it is self-paced and of variable length, seems to offer the opportunity for students to get into more disciplinary problems than does a course that relies on classroom instruction and has a fixed length. To examine this possibility, disciplinary problems associated with the BAAC course were compared with those associated with the basic supply course (MOS 76A10) taught at both Fort Ord and Fort Jackson.

At Fort Jackson official disciplinary records were obtained for 10 71B10/20 classes, classes 73-40 through 73-49. These records covered a total of 817 students. Comparable data were obtained from 10 76A10 classes conducted during the identical time period. The records for these classes covered a total of 357 students.

At Fort Ord disciplinary records were obtained for 13 classes of 71B10/20 students, classes 73-43 through 74-06, covering a total of 1,074 students. Comparable data could be obtained for 12 classes of 76A10 students, covering classes 73-42 through 74-06. The 76A10 class data covered a total of 408 students.

The disciplinary data collected covered the following actions: (a) Article 15—fines and confinement to post; (b) courts-martial; (c) Chapter 10—action taken in lieu of a court martial; (d) DFR—dropped from the roster, usually for desertion; and (e) arrest/confinement. In addition to obtaining information on official disciplinary actions, an attempt was made to collect information that could be used to judge how much academic training time was lost by the typical student as the result of being AWOL, being under arrest and confinement, or reporting to the clinic or hospital. Through interviews with administrative personnel associated with the BAAC course at Forts Ord and Jackson, information on disciplinary problems was obtained.

The findings obtained for this study of disciplinary problems were as follows:

(1) At both Fort Ord and Fort Jackson, a significantly higher portion of males than females had official disciplinary actions taken against them.

(2) At Fort Jackson 16 percent of the male 71B10/20 course students were involved in one or more disciplinary actions, as compared with 14.5 percent of male 76A10 course students.

(3) At Fort Ord 7.4 percent of the male 71B10/20 course students were involved in one or more disciplinary actions, as compared with 8.9 percent of male 76A10 course students.

During the spring and summer of 1973, 177 of 1,599 (11 percent) of the BAAC students were involved in disciplinary actions, while 87 of 756 (11.5 percent) of 76A10 male students were similarly involved. In terms of absolute numbers, there were many more disciplinary actions associated with the BAAC course. This finding, however, must be interpreted in terms of the large number of students who attend that course each year. On a percentage basis, the incidence of disciplinary action against BAAC students was not significantly different from that for 76A10 students.

The analysis of academic time lost due to disciplinary and other reasons showed that for both the BAAC and the 76A10 course the bulk of lost academic time was due to assigned duties and details. Furthermore, this analysis revealed no evidence that students of one course were more prone to malingering than those from the other course.

Discussions with administrative personnel indicated that the key to preventing the occurrence of minor disciplinary problems is to develop procedures which allow the graduate to clear post soon after graduation. Apparently this has been done; in early 1974 it took only a few days to accomplish this while earlier it apparently took much longer.

COURSE CRITERION MEASURES

In a self-paced, variable-length course such as the BAAC course, most students do graduate. However, they progress at different rates and their performance at the end of the course may vary considerably. Therefore, the type of end-of-course performance data obtained for this study included:

      (1) Academic time required by each student to complete the course.

      (2) Number of End-of-Course (EOC) test parts passed on the initial attempt.

      (3) EOC typing speed.

Time to Complete Course

For students of the 74-08 class at Fort Ord, the average academic time of course completion was approximately 100 hours. The students at Fort Jackson required an average of 104 hours of academic time to complete the course. At both installations, the total time required to complete the course was somewhat higher because of the duties and details (parade details and so on) to which students were assigned. The findings revealed that female students progress through the course at a much more rapid rate than male students.

Number of EOC Tests Passed

The student must pass an EOC Test consisting of eight individual parts in order to graduate from the BAAC course. Each part is related to one of the programmed texts studied during the course. The student must pass all eight parts. If he fails one or more of them, he returns to the classroom to study the related portion of the course material.

The results of this study showed that a high proportion of the EOC test parts were passed by students on their first attempt to take the EOC text. Male students, on the average, passed 6.6 parts of the eight-part EOC exam; the average female student passed 7.2 parts of the examination. Forty-four percent of the students passed all eight parts of the test during their initial attempt. An additional 24 percent failed only one of the eight parts.

Typing Speed

The typing speed of each student is determined upon entering the BAAC course. Students are assigned to an instructional track based on this entry level typing speed. Throughout the course, speed checks are conducted to determine the current rate at which the student is able to type. To complete the course, the student must demonstrate an ability to type at least 20 NWPM.

Study results showed that at entry into the BAAC course, the average student who eventually graduated from the course could type about 7 NWPM. At the end of the course the average student could type approximately 28 NWPM. Male students could type about 26 NWPM while female students could type at the approximate rate of 33 NWPM.

Course Dropouts

To a considerable extent, the effectiveness of a self-paced, variable-length course is indicated by the proportion of students who graduate from the course. For class 74-08 at Forts Ord and Jackson, the dropout rate was 2.5 and 8 percent, respectively.

Effectiveness of the BAAC Course

The BAAC course is effective at both Fort Ord and Fort Jackson. The average student completes the course in approximately 102 academic hours and, at the end of the

course, is able to type around 28 NWPM. The course dropout rate shows that very few students fail the course, and the EOC test results suggest that only one-third of the students have to restudy any major portion of the course material.

SELECTION FACTORS

Aptitude Prerequisites

The 71B10/20 course has two components: One involves the acquisition or improvement of typing skills, and the other the acquisition of facts by means of PI texts. The aptitude prerequisites associated with these two components of the course are different. It was found that four academic variables—Clerical Aptitude (CL) scores, General Technical (GT) scores, Armed Forces Qualification Test (AFQT) scores, and years of education—were quite highly correlated with the amount of academic time required to complete the course. All correlations were higher for Fort Ord data than for Fort Jackson. This was due, in part, to the higher stability of the course at Fort Ord.

Of particular interest, were the correlations between CL scores and academic time to complete the course. These were - .52 and - .31 respectively for the Fort Ord and Fort Jackson data. These correlations indicate very clearly that a high CL score is associated with a lower course completion time. Biserial correlations between clerical scores and whether a student eventually graduated from the course were .43 and .17 respectively for Fort Ord and Fort Jackson. The combined correlation was .28.

The findings showed that success in the BAAC course is highly related to entry typing speed. The correlation between typing speed at the end of the fifth course day and academic time to complete the course was - .67 and - .70 respectively for Fort Ord and Fort Jackson. The biserial correlation between entry typing speed and whether a student became a graduate of the course was .58 for the combined data. The evidence obtained during this study suggests that students drop out from or have difficulty in the course primarily because they lack a minimum amount of typing skills at entry into the course.

Utility of Initial Typing Speed as a
Selector/Predictor Variable

The results suggest that success in the BAAC course is more highly correlated with entry typing speed than entry academic potential. Success in the BAAC course can be even more accurately predicted after allowing a student to remain in the BAAC course for one week. For example, the results show that the biserial correlation between typing speed at the end of the fifth day of the course is .75 whether or not a student becomes a course dropout.

Other data show that for the class 74-08 at both Fort Ord and Fort Jackson a total of 73 students entered the course with a typing capability of less than 10 NWPM. Of these students, 42 eventually became course dropouts. The same data also showed that 395 students of the 74-08 class could type at 11 or more NWPM at entry into the course. Of these students, only 18 eventually became course dropouts.

The results of this study indicated that the BAAC course, as it is currently constructed, is not able to teach typing skills to those students who enter the course with no, or a minimum amount of, such skills. This suggests that persons who cannot type at least 10 NWPM should not be allowed to enter the BAAC course. According to the data collected in this study, establishing such an entry criterion might screen out 15 percent of those students who might otherwise be allowed to enter the course. In the event that this criterion might be viewed as too restrictive, those students who can type no more than 5 NWPM on the fifth day of the course might be dropped from it.

STUDENT ATTITUDES AND EXPERIENCES

According to questionnaire results, the average student at entry into the BAAC course was neither interested nor disinterested in the acquisition of clerical and typing skills. After three weeks in the course, student interest in these skills had undergone little, if any, change. The opinions of future course graduates and future dropouts were similar at entry into the course. Three weeks later (when most dropouts had already been dropped from the course) the interest of dropouts in clerical and typing skills had noticeably declined. On a number of comparisons, Fort Ord graduates and dropouts expressed less interest in clerical work and/or in becoming skilled typists than did their Fort Jackson counterparts. A possible explanation for this is that the group typing period at Fort Ord is more concentrated and probably more grueling than the course at Fort Jackson.

A number of course dropouts reported that they never had been interested in becoming skilled typists. They had been assigned to the BAAC course somewhat against their wishes because their first choice of MOS could not be honored.

Comments of both course instructors and students suggested the possibility that most students, after two or three days' exposure to the BAAC course, have tentatively decided whether they are willing to work hard to complete the course. This would have an obvious impact on their subsequent interest in the course.

Comparing the course graduates with dropouts, the results showed that many more graduates had prior typing experience (about 57% vs. 8%).

Prior Experience With Programmed Instruction (PI)

Approximately 73 percent of the students who enter the BAAC course have had no previous experience with PIs and/or self-pacing. Combining the Fort Ord and Fort Jackson data, approximately 15 percent of the dropouts had some prior experience with PIs, while approximately 20 percent of the graduates had some prior experience with PIs and/or self-pacing. These data suggest that success in the BAAC course is not attributable to prior experiences with PI courses.

Student Morale

The students interviewed and surveyed during this study tended to have favorable opinions toward the course. In general, they favored the concept of self-paced instruction. As expected, the morale of course dropouts seemed to be lower than those who were still in the course. The students complained most about being given non-training assignments during the course. In general, the morale of an individual student was related to the student's success in the course.

Relation of Attitude to Achievement

Based on questionnaire results plus interviews with the students and instructors, it seems highly likely that most of the important student attitudes about the 71B10 course are formed during the first and second week of the course. During the first week of the course, students discover whether they have an interest in becoming skilled typists and mastering the clerical requirements of the course. Those who entered the course with some typing ability apparently perceive that they will be able to complete the course and therefore develop a positive or at least a neutral attitude toward it. Those students who have difficulty in the beginning of the course, particularly with their typing, seem to rapidly develop negative attitudes toward the course. On a number of the student questionnaire items, course dropouts expressed significantly more negative attitudes than did those students who eventually became course graduates.

From interviews with course instructors, it would appear that most students who are dropped from the 71B10/20 course decide rather early in the course that they probably will be dropped and/or that they want to be dropped. They do as little as possible until they actually are dropped; they may even become disciplinary problems. This study's findings suggest a positive relationship between student attitudes toward the BAAC course and achievement during the course.

TRAINING ENVIRONMENT

Course Structure

Group Typing Procedures. At both Fort Ord and Fort Jackson, trainees who cannot type 11 NWPM when they enter the BAAC course are assigned to the Group Typing portion of the course. This portion of the BAAC course is conducted quite differently at the two installations.

At Fort Jackson a student advances to the self-paced portion of the course as soon as he can type 11 or more NWPM on three adjacent timed writings. At Fort Ord a student advances similarly if he can type 15 or more NWPM. At both installations the student advances to the self-paced portion of the course if, after a two-week period, he can type at the rate of 11 or more NWPM. At Fort Jackson Group Typing is presented by civilian instructors who have taught the same course for many years. At Fort Ord the first week of the course is taught by video tapes and the second week by self-study material. Military instructors (not necessarily experienced) monitor the classroom. Their turnover rate is high. At Fort Jackson three PIs may be interspersed with typing practice during the first two weeks. At Fort Ord PIs may be studied during the second, but not the first week of Group Typing.

Study findings related to the typing portion of the BAAC course were as follows:

> (1) As compared with Fort Ord students, more Fort Jackson students reported that (a) they had been adequately informed about typing procedures; (b) the typing portion of the course was interesting; and (c) there was little need to improve the typing materials of the course.
> (2) Students at both Fort Ord and Fort Jackson suggested that the Group Typing portion of the course should be lengthened.
> (3) Although the Fort Ord students commented somewhat favorably on the use of video tapes to teach typing, they said that the tapes went too fast. Consequently, they missed certain instructional points. Both the students and the instructors at Fort Ord stated that portions of the video tapes were obsolete.

Self-Pacing Versus Guided-Pacing. The BAAC course is a self-paced variable-length course with the exception of the two-week Group Typing portion for students with little or no course-entry typing skills. In practice, considerable pressure is placed on students to progress through the course at a reasonable rate. Unofficial "bench marks" or guidelines have been established to indicate where a student should be in the course after any particular length of study. If a student is not close to the appropriate bench mark, he will be "counseled" in an effort to improve his performance. Many students complained about this course feature. Also, course instructors and Training Company personnel reported that many students felt they were pushed through the course, especially the typing portion, at too rapid a rate.

A number of students suggested that more time should be allowed for non-typists to master course typing requirements. Some students said they were led to believe that they would have up to seven weeks to meet course typing requirements. Instead,

they found that within a two-week period they had to meet what, to them, seemed to be an unreasonable requirement for those who could not type at entry into the course.

Sequence and Difficulty of PIs. The BAAC course PIs are supposed to be studied in a particular sequence. The importance of maintaining this sequence was not investigated during this study. However, due to a lack of PI texts at Fort Jackson, the students of class 74-08 and adjacent classes studied the PIs in an almost random order. At Fort Ord the recommended PI study sequence was followed. This situation did seem to lead to lower correlations between independent and course outcome variables for Fort Jackson students as compared with those obtained for Fort Ord students.

BAAC course students at both Fort Ord and Fort Jackson expressed somewhat favorable opinions about PIs, but reported that some of them are very difficult. In particular they, and their instructors as well, cited PIs 23, 11, and 17. These PIs deal respectively with Military Correspondence, Second Half of the Morning Report, and DA Publications.

According to BAAC course instructors, the PI material is not too difficult for most students and seems to be of interest to them. They did report, however, that quite a few students have difficulty with the vocabulary found in the PIs.

Frequently mentioned student suggestions for improving the PI material included: (a) eliminate or shorten some PIs; (b) provide a glossary of terms for each PI; (c) re-format the PI material to make it easier to read; (d) try to make the PI material more interesting; and (e) try to make the PI material more job relevant.

Examination Procedures. At the end of each PI there is a Criterion Test which is taken by students when they feel ready for it. When possible, an instructor immediately grades the test and tells the student what test items he missed. Sometimes the instructor reviews the missed items with the student, but more often the student is told to return to his seat and restudy the PI material.

At the end of the course there is an End-of-Course (EOC) examination consisting of eight parts, one part for each PI studied during the course. A ninth course PI is not covered on the EOC examination.

Somewhat different EOC testing procedures are followed at Forts Ord and Jackson. At Fort Ord the EOC is administered in two parts, one part after the fifth course PI and the second part after course completion. Before each test session small groups of students reviewed the PI material to be covered in the EOC test. At Fort Jackson the entire EOC test is administered at the end of the course. There apparently is no formal review period prior to the test.

A typing test is also administered as part of the EOC test. At Fort Ord, this test is administered by a typing committee, in the classroom. At Fort Jackson the EOC testing committee gives the typing test.

To graduate from the BAAC course a student must demonstrate a capability to type at least 20 NWPM. In addition, he must pass all parts of the EOC test covering course PI material. If a student fails one or more parts of the EOC test, he returns to the classroom and studies the PIs related to the failed EOC test parts. When he indicates his readiness for retesting, he is tested on an alternate form of the EOC test.

Some of the comments provided by both students and instructors with respect to the criterion and EOC tests follow:

> (1) Many instructors mentioned the need for a review period prior to sending a student to take the EOC exam.
> (2) Many students reported that the test items were related to course material, and the criterion tests were useful in pointing out one's strengths and weaknesses in the course.
> (3) Both students and instructors reported the need for receiving more information about why a student failed a particular part of the EOC

examination. In particular, the instructors said they needed to know what test items were missed by a student so that they could more efficiently work out a program of remedial study for the student.

As discussed earlier in this report, about one-third of the BAAC course students pass all parts of the EOC test in their first attempt. Another one-third fail only one of the eight EOC test parts.

Counseling Procedures. Once a student begins to experience academic difficulty he participates in one or more counseling sessions with his instructor. During these sessions the instructor attempts to identify the cause of the difficulty and to develop a course of remedial action. Sometimes the instructor attempts to motivate the student. He may explain to the student certain instructional points which the student has not grasped. The instructor may recommend that the student talk with a senior instructor, or with his Company Commander. Generally, a counseling session is designed to motivate a student or to provide him with specific academic assistance.

The findings of this study suggested that many students are helped by counseling. However, most dropouts of the course reported that they were not helped by counseling. According to the comments of BAAC course instructors, a counseling session (a) is held after a student has been having academic difficulty for some days, (b) is held primarily to determine what can be done to motivate the student, and (c) often is held for the purpose of deciding whether to drop the student.

According to comments obtained from BAAC course students and dropouts, counseling sessions (a) are helpful in that they provide students with information about what will happen to them if they fail the course; (b) are of little or no academic help to those who are eventually dropped from the course; and (c) may be held for the first time to inform the student that he is being dropped from the course. In fact, about half the course dropouts interviewed at Fort Ord claimed that they had received no counseling prior to being dropped from the course.

The student counseling and monitoring procedures employed at Fort Ord seemed designed to rapidly identify those students who are potential course dropouts. These students are dropped from the course at the end of the first week. In most instances students are dropped because of poor typing ability.

During counseling sessions with instructors, students often would be told about the perils of being assigned to another MOS. They were admonished that if they did not perform better they would be sent to "cook's school," to the infantry, or to some other lower status MOS (as perceived by the instructor).

Course Dropout Procedures. Most students are dropped from the BAAC course for academic reasons, usually an inability to master the typing requirement. A student is recommended for dropping by an instructor. At Fort Jackson, such a recommendation might come during or after the third week of the course. The student then goes before a review board and his case is considered. He may be dropped immediately from the course or be given another chance. Those students who are "slow learners" but appear to be well motivated often are allowed to continue the course.

At Fort Ord, during the first week of the course, a special effort is made to identify those students who probably cannot meet course typing requirements. These students are dropped from the course within the first couple of weeks. At Fort Jackson all students are allowed to continue in the course for at least two weeks. Twenty-six percent of 27 Fort Ord dropouts had been dropped on or before the seventh day of training; 59 percent had been dropped by the end of the 12th day of training. Of 33 BAAC course dropouts studied at Fort Jackson, none had been dropped by the 10th training day of the course; by the 12th day 27 percent had been dropped.

The course at Fort Ord is more efficient in that it drops poor typists as soon as possible. On the other hand, the Fort Jackson procedures give students with no prior

typing experience more of an opportunity to demonstrate whether they can learn to type.

Comments provided by course dropouts suggested that they were dropped because of poor typing ability, and that the instructors could have done little to prevent these persons from becoming dropouts. Instructor comments suggested that typing is a skill which only some can learn. The instructors seemed to be at a loss as to how to provide remedial typing training to a student.

During this study the training records of 59 academic dropouts were analyzed. Thirty-three students were dropped for not meeting course typing requirements; 13 students apparently were dropped because they could not learn the PI material; the other 13 students seemed to have been dropped because of a combination of academic problems.

Study Facilities

The training facilities at both Fort Ord and Fort Jackson were acceptable. At both installations the number of students per classroom was rather large, making it difficult for someone to study a PI while others were typing. Both students and instructors complained about the typewriters, many of which were in disrepair. According to Fort Ord instructors, a more rugged typewriter should be used for training purposes.

In some instances, there was a shortage of PI material. This condition was much more severe at Fort Jackson where the preferred sequence for presenting the PI texts could not be followed because of lack of PI texts.

At both Fort Ord and Fort Jackson study hall was available in the evening—four days per week at Fort Ord and two days per week at Fort Jackson. Slow learners were required to attend study hall but all students could attend if they wished to do so. Most students and dropouts reported that they knew that study hall was available to them; many reported that they had voluntarily attended study hall. However, many also reported that the study hall was too noisy and smoky. Instructors reported that they did not like to be assigned to study hall. This suggested that the amount of instructor assistance available to study hall attendees might be limited.

Relationships Between School, Training Company, and
Battalion/Brigade Personnel

Many of the findings which could be discussed here are more appropriately discussed under other topics. Many are related to three general problem areas:

(1) Who has the final control over students, the Training Company or the School?

(2) To what extent should Training Company Drill Sergeants and course instructors interact?

(3) To what extent are Battalion/Brigade personnel correct in assuming that skilled instructors are not needed in a self-paced course presented by PI texts?

The school attempts to motivate students by a reward system which makes heavy use of three-day passes. Ultimately, however, a student is under the control of a Training Company. The Company sometimes prevents a student from accepting an academic award. This leads to conflicts between the School and Training Companies.

When Drill Sergeants and instructors work closely together, it is possible to identify incipient motivation problems—personal problems which may affect academic performance, poor academic performance which may lead to motivation and disciplinary problems, and so on. Instructors and Training Company personnel reported occasional interaction, but admitted that much more of this would be desirable.

Both BAAC School and Training Battalion/Brigade personnel reported that, in their judgment, the BAAC course was easy to administer. Their comments suggested that expert instructors were not required for the course. One outcome of this belief seems to have been that BAAC course instructors were taught to be course administrators but not how to instruct or counsel students. Comments obtained from the instructors revealed that they felt their value as instructors was not appreciated by School and Training Battalion/Brigade personnel.

Instructor-Student Relationships

For the most part, BAAC course instructors are involved with administrative duties—maintaining training records, correcting criterion tests, and maintaining classroom discipline. They attempt to assist a student only when requested by the student to do so.

Most instructors reported that they provide tutorial assistance to students. They demonstrate proper typing procedures, explain terms and examples found in PIs, review criterion test errors with the students, and counsel students as required.

Comments obtained from the BAAC course students indicated that they did not feel that the instructors provided much in the way of academic assistance. The students reported that instructors: (a) do not want to be bothered with them; (b) do not provide specific assistance but instead tell them to "go back to your seat and study"; (c) either were unwilling to or did not know how to assist slow learners; (d) did not know how to explain typing procedures and/or course material found in the PIs; and (e) were more interested in using threats and rewards than encouragement to motivate students.

The findings of this study indicated quite clearly that instructors pay little attention to students until they have to. The findings also suggested that few instructors knew how to provide academic assistance; apparently some instructors were not even aware that this was part of their instructor duties.

Student Incentives

A variety of reward programs have been incorporated into the BAAC program: (a) selection of an honor student; (b) promotion of the top 15 to 20 percent of each class; (c) award of three-day passes during training; and (d) assignment as an Assistant Instructor immediately following training. All of these procedures reward exceptional students; the average student cannot successfully compete for such rewards.

Student and course dropout comments reveal: (a) most students had few positive or negative opinions about the course incentive system; (b) many students felt that instructors preferred to use threats and punishments instead of rewards and encouragement to motivate students; and (c) students, in general, were less interested in receiving a promotion and more interested in receiving an immediate reward, such as a three-day pass or relief from duties and details.

Some instructors reported that students receive no rewards during the BAAC course. Others reported, along with many students, that good students are penalized for completing the course early—they are assigned extra duties because they are available for such assignments. The majority of instructors at both Fort Ord and Fort Jackson said they favored the use of rewards rather than punishments and threats to motivate students. They also believed quite strongly that students were adequately informed about the rewards and punishments which would be employed during the course.

At Fort Jackson an informal arrangement had been made between one Training Company and one Instructor Cadre so that students earning a three-day pass for academic achievement could use that pass immediately. Bench marks were established to indicate how rapidly a student must proceed through each section of the course in order to

obtain a pass. It was possible to receive three extra passes during the course. This program had been in operation for only a few months, but seemed to be working well.

Instructor Incentives

Instructors at both Fort Ord and Fort Jackson were very positive in their belief that instructors are not properly rewarded for good performance. They reported that: (a) they felt ignored; (b) aside from personal satisfaction, there was no incentive system for instructors; and (c) they were disillusioned with their role as instructors. Many instructors referred to the absence of such programs as "instructor of the month," a three-day pass for instructor of the week, letters of commendation, and articles about the BAAC course in the post newspaper.

This study uncovered no specific evidence to suggest that instructor performance had deteriorated because of low instructor morale. However, something might be done to provide a system for recognizing and rewarding exceptional instructor performance. This topic will be addressed later in this report.

MANAGEMENT OF A SELF-PACED COURSE OF INSTRUCTION

Students and staff report a number of problem areas in the BAAC course that are amenable to change. On the basis of HumRRO experience with other self-paced courses, these problems are typical of any self-paced, variable-length course using programmed instructional material. The sections which follow will discuss some of the problems in managing and conducting the present BAAC course and suggest ways for improvement. These suggestions are applicable to most other self-paced courses supported by PI text.

UP-DATING PI MATERIAL

All of the instructors interviewed during this study complained about the difficulty of keeping the PIs up to date because of the constant changes in Army Regulations. Some instructors reported they were reluctant to use certain PIs because they were usually out of date. The problem is a serious one and is faced by any course presented primarily by PIs or any other fixed copy, such as video tapes or film.

Most military courses are related to regulations, doctrine, or equipment specifications. These change from time to time, necessitating the modification of course-related material. In particular, courses, such as the BAAC course, which are based on regulations are constantly subject to change. This presents two basic problems: (a) what procedures will be used to make the modifications; and (b) who will be responsible for executing the various aspects of these procedures.

This study did not investigate in detail the procedures for up-dating BAAC course material. However, the course proponent, the Adjutant General (AG) School is responsible for (a) identifying changes which should be made in the course material, (b) developing up-to-date course material, and (c) disseminating this material to schools conducting the BAAC course. School personnel have the responsibility of posting and/or incorporating new course material into existing PI texts.

The instructors interviewed during this study claimed that they did not have the time or adequate facilities to post changes to the PI text. It seems appropriate to examine this problem more fully and, in particular, to identify who should be

responsible for various activities in a complete PI material updating process. For example, a proponent for a PI course might be given the following responsibilities:

(1) Periodic identification of those portions of the course which have become obsolete.

(2) Preparation of new instructional, testing, and reference material to replace obsolete material.

(3) Distribution, on a semi-annual basis, of

(a) A list of additions, deletions, and changes which should be posted in the PI text,

(b) A suitable number of sets of completed pages which should be substituted for pages in the PI text.

(4) Distribution, on an annual basis, of updated copies of existing PI text to replace those lost due to "fair wear and tear."

(5) Distribution on a periodic basic (such as every third or fourth year) of a completely updated and newly printed set of PI texts.

The School might be assigned responsibility of posting minor changes to PI material on a quarterly basis, and substituting new pages for obsolete pages on a semi-annual basis. Minor changes could be made by pen and ink postings. Page changes might be made by pasting a new page of material on an obsolete page, or, by replacing an old with a new page in a loose-leaf text.

Consideration might be given to how students could be used to update PI course material. It is a fact of military life that sooner or later one will become involved with the posting of changes to printed material. This skill is a legitimate topic for a block of instruction; such a block does exist in certain Advanced Individual Training (AIT) courses. It teaches students how to post changes to official service publications, such as manuals and regulations. It would be possible to expand this type of instruction to include the posting of changes to instructional material. The content of such a unit of instruction might deal specifically with the procedures for posting changes to and/or substituting new for obsolete material for official Army publications and PIs.

PROVIDING COURSE PROGRESS FEEDBACK TO STUDENTS

A self-paced course is self-paced only to the extent that the student progresses through the course at a minimally acceptable rate. A student in a self-paced, variable-length course such as the 71B10/20 course may be under the impression that he has six or seven weeks to master course requirements. This is not true; each week he is expected to acquire additional skills and knowledges at some mimimum rate. As previously mentioned, bench marks have been established to indicate the average rate at which students should progress through the BAAC course. If they do not progress at these rates, they are subject to counseling. This is an acceptable procedure to follow. Problems occur when students are unaware that such benchmarks have been established for the course. Based on student comments obtained during this study, it would appear that very few, if any, BAAC course students are aware that they are supposed to progress through the course at a minimum specified rate.

One possibility for handling the problem is to develop "rate of performance curves" which could be used by students to monitor their own progress during the course. These performance curves could be established on the basis of experience with former classes to indicate what is expected of the average student, a student in the top quartile of the class, and a student in the bottom quartile of the class. In addition to displaying such performance curves in the classroom, a handout containing the curves might be given to each student to be used to plot his own progress during the course.

This self-monitoring procedure should have a beneficial effect. Some students might be spurred to increased efforts when they see their rate of progress becoming dangerously slow. At the very least, the self-monitoring practice should ensure that all students are aware that a minimum academic rate of progress is expected of them.

STUDENT RECLASSIFICATION AND INCENTIVE SYSTEMS

Students are assigned to the BAAC course primarily on the basis of clerical aptitude (CL) scores and on their expressed interest in becoming a clerk-typist. For some students, however, the course may be their second or third choice of assignments. Moreover, at the time of assignment some students may not understand the typing requirements of the course. In particular, those students who have had no typing experience may not be aware of the effort required to become a skilled typist. For these and other reasons discussed in Annex B, some students become rapidly disillusioned with the BAAC course.

The results indicated that 78 percent of the course students who could type no more than 5 NWPM by the end of the fifth day of the course were eventually dropped from the course. According to interviews with these students, some of them did not wish to become typists once they discovered what was involved. The course dropouts had to be reclassified or discharged from the service, but they did have the opportunity to discover what is involved in learning how to type, to learn something about the job requirements of a clerk-typist, and to demonstrate whether they had the ability or interest to become a skilled typist. They were reclassified or dropped from the service on the basis of highly relevant job-oriented training criteria.

It is suggested that CL scores continue to be the basis for allowing a person to enter the BAAC course. It is also suggested that those students who cannot type at the rate of 5 NWPM by the end of the fifth day of the course be considered for reclassification to another occupational specialty area.

Both student and instructor respondents of this study expressed few complaints about the incentives and counter-incentives used with the BAAC course. Many of them did, however, recognize the inequities in the typical incentive system employed with training programs. The typical student incentive system offers rewards for outstanding academic achievement—an honor student is chosen and usually promoted; the top 15 or 20 percent of the class may be promoted; exceptional students may be awarded a three-day pass during or at the end of the course. Only the academically superior student can successfully compete for such awards. Therefore, most students of a course will not be officially rewarded for their academic performance but will be motivated primarily through the use of counter-incentives. They are informed of the consequences of failing the course; they are told to attend study hall; sometimes they are assigned extra details; and they are sometimes "chewed out" by their instructors.

It is quite possible that many academically inferior students are just as highly motivated, if not more so, than superior students. Slow learners may even expend more effort during the course than those students designated as superior students. Relative to their entry capability, slow learners may show a greater percentage of improvement during the course than the typical superior student. It is extremely difficult to develop a practical incentive system for academically inferior students. If such a system is desired, the following suggestions might form the core features.

The proposed student incentive system would give rewards on the basis of how well each student was performing in terms of his own potential. Therefore, it might be possible, during the first two or three days of a course, to employ a special testing committee to assess the entry performance capability of each student. This assessment

might include the measurement of a student's ability to learn certain types of material, and his ability to type at least 5 NWPM by the end of the fifth course day. Based on these assessments, a prediction could be made regarding the probable time it would take each student to complete the course. As discussed in Annex B, this prediction can be based on the CL score and typing speed.

In effect, this assessment would be made in terms of whether the student seemed to have the potential for being a fast or a slow learner. The student might then be assigned (for administrative purposes) to one of four capability tracks and would be expected to progress through the course in accordance with the performance curve developed for his particular track. Each student would be rewarded in some manner in accordance with the extent to which he exceeded the rate of performance for his student track.

Obviously, this system could be subverted. In particular, one would have to be on the alert to determine whether large numbers of students were deliberately faking their entry performance capability in order to be assigned to a low-capability track.

This and other studies have suggested that students are interested in immediate impact rewards as opposed to delayed impact rewards. Immediate impact rewards include three-day passes, relief from details and duties, extra leave during or after a course, and the award of a monetary bonus at the end of training. Delayed impact rewards include promotion at the end of training and giving students a choice of assignment. The student respondents of this study were most interested in receiving as a reward a three-day pass which can be used immediately.

The findings suggest that a student incentive system might be based solely on immediate impact rewards. A three-day pass might be the primary reward for exceptional academic performance. For a variable-length course, fast learners might be awarded additional leave upon graduation; exceptional students might be given one or two days off during training. This would not interfere with their training schedule, assuming that the course is a self-paced one.

The exclusive use of immediate impact rewards could lead to the termination of the current practice of promoting exceptional students at the end of a course. Exceptional students might be given an end-of-course monetary bonus in lieu of a promotion. A particular advantage of this suggestion is that this bonus would have no impact on the organizational unit to which the course graduate would eventually be assigned. This procedure, therefore, would not restrict the flexibility of organizational units to promote recently acquired personnel.

This study uncovered a rather serious problem which probably exists in most AIT schools: Who should have final control over the students—the Training Company or the School? With some exceptions, the Training Company has the final word on whether a student will be allowed to use a reward such as a three-day pass.

The problem of who controls the student may become particularly acute when an academically good student has difficulty adhering to the rules, regulations, and policies which govern his behavior after normal duty hours. For example, the following type of problem occurs: a student's appearance is somewhat slovenly and his immediate living area in the barracks may be below inspection standards. Yet, he is a fast learner in the classroom and thus eligible for a three-day pass. The Training Company generally would not allow the student to execute his three-day pass and a major feature of the School's incentive system would be negated.

One possible solution to the aforementioned problem is to have the Training Company and School agree informally to allow students who have been awarded a pass by the School to use it immediately. Such an informal agreement has been implemented at Fort Jackson and appears to be working.

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Another alternative might be to institute a reward system based on a combination of academic performance and performance in the Training Company. As an example, a certain number of "pass days" might be earned for special academic progress. In addition, each student might accumulate "pass days" at some rate such as 1/2 day per week for each week he passed various personal and barracks inspections. A demerit system (which is now used at many AIT installations) might be used to subtract hours from this accumulation of pass days. When a student had accumulated a certain number of pass days he might be allowed to take all or a portion of them. The demerit system used in the Training Company could be adjusted so that a student who really "goofed up" would receive sufficient demerits to offset those which he might accumulate for superior academic performance.

EOC TEST SCORING AND REMEDIAL TRAINING PROCEDURES

Many of the instructors interviewed during this study reported that they would like to have had more information about what items of the EOC test were failed by a student. Currently, students who fail one or more parts of the EOC examination are returned to the classroom (Fort Ord) or to a special group of instructors (Fort Jackson) where they study further those PIs related to the failed parts of the EOC test. It is up to the class or remedial training instructor to tell the students what they should study in order to prepare themselves to retake the EOC test.

Comments from both students and instructors suggested that current procedures for feeding EOC test failure information back to instructors and students are informal and somewhat haphazard. Currently, an EOC instructor corrects a student's EOC examination as soon as possible after the student has completed the exam. If the instructor has time, he may tell the student what test items he missed. More likely, the instructor records the student's EOC test scores on the student's training record, indicates those major parts of the EOC test failed by the student, and instructs the student to report back to the school for remedial training. The student reports back to the school and an instructor, after reviewing his training record, inquires as to what specific test items the student missed. If the student knows and remembers, this information is conveyed to the instructor who can then develop a course of remedial training. In the absence of specific information, the remedial training instructor must instruct the student to restudy all portions of the PI associated with each failed part of the EOC test.

It would appear that the EOC test feedback procedures just described could be greatly improved. For example, for each EOC test item, material might be prepared describing what portions of a PI a student should study if he failed that particular item. This information could be made available to both the student and his remedial training instructor. In addition, after a student's EOC examination had been scored, a checklist could be completed by the EOC instructor. This checklist could indicate those test items failed by the student. The student then could take his checklist to a remedial training instructor.

If such suggestions were followed, a remedial training instructor would have, for each student, an EOC test feedback checklist plus study guide material which could be used to develop for each student a remedial study program covering those specific portions of the EOC examination which that student had failed.

ORGANIZATIONAL MAKE-UP OF INSTRUCTOR CADRE

The findings of this study suggested that BAAC course instructors are unclear about their role as instructors. They had been taught to maintain classroom training records and to administer the BAAC course. They were told that they should counsel students and provide academic assistance to slow learners. However, instructors often reported that they were so bogged down in record keeping activities they could not take the time to provide academic assistance to the students.

The instructor personnel of a BAAC course are divided into two groups: an instructor group and an EOC test committee. The duties of the EOC test committee are fairly well defined; they deal quite specifically with the administration and scoring of the End-of-Course examination. On the other hand, the duties of the typical BAAC course instructor are rather undefined and are quite varied. In some instances, the instructor may function merely as a classroom monitor, maintaining order in the classroom as the students study self-instructional material. Much of the instructor's time is taken up with the maintenance of training records and the scoring of criterion tests.

From time to time, the instructor must function as an academic counselor. In such instances, his task is one of motivating slow learners, determining why the student is not progressing at a satisfactory rate. Occasionally students may ask instructors for academic assistance, requiring the instructor to function as a tutor. According to many students, instructors perform this role in a very perfunctory manner.

At two general points in the course, an instructor must provide remedial training. If a student fails certain portions of a criterion test, the instructor *must*, or at least *should*, provide guidance to students regarding what portions of a PI should be restudied. If a student fails one or more parts of the EOC examination, he returns to the classroom where an instructor tells him what portions of the course should be restudied.

Obviously, the various duties and responsibilities of an instructor require different types of skills. A carefully designed PI course needs only a few expert instructors. A judicious mixture of course administrators, classroom monitors, and instructors should suffice. This assumes that the role of the classroom monitor and course instructor have been carefully defined and are distinctively different. If not, classroom monitors will also have to function as instructors, possibly resulting in a loss of efficiency of PIs.

It appears that the BAAC course, as presently conducted, is somewhat inefficient due in part to the fact that instructors have to play many roles, most of which they are not trained to perform. It seems reasonable to suggest, therefore, that the instructor cadre of the BAAC course might be reorganized so as to recognize the need for various types of instructor specialists.

Such a reorganization might proceed on the basis of the following assumptions about the role of instructors in large student-volume PI courses: (a) most instructors need to be skilled classroom monitors, but do not have to be course content experts; (b) a few instructors need to be highly skilled specialists in the art of student diagnostic counseling, academic counseling, and remedial or tutorial training; and (c) each person associated with a PI course should be skilled at performing a small set of course-related activities.

Based on the foregoing assumptions, it seems appropriate to reorganize the instructor cadre of the BAAC course in accordance with the following suggestions:

(1) The bulk of the instructor cadre should function as classroom monitors/ training record keepers. Persons holding this job position would be responsible for routine course administration, maintaining order in the

classrooms, maintaining training records, and referring students to appropriate course specialists as the need arose.

(2) Diagnostic counselors would be concerned primarily with why students were having academic difficulty. In addition, diagnostic counselors should be completely familiar with the various persons to whom a student could be referred in order to handle his academic and/or personal problems.

(3) Academic counselors would be concerned primarily with improving the performance of slow learners—those students who failed portions of the EOC test. Academic counselors would be expected to be highly skilled in the art of providing tutorial instruction; therefore, they should be the course content experts.

(4) There is a need for a small group of instructors who are skilled at reviewing the content of the course with students before they take the EOC examination. These same instructors might also be used to plan the remedial training sequence which should be undertaken by each student who fails a part of the EOC examination.

(5) The position of EOC test administrator already exists in the BAAC course. The job duties are concerned primarily with the administration and scoring of the EOC test.

INSTRUCTOR INCENTIVES

Study findings revealed that many BAAC course instructors were quite unhappy with their role as instructors. They felt neglected by the school administration and reported that no one cared how they performed as instructors. They said that some of their fellow instructors were inadequate; some of them did not even know the content of the course or how to type. The instructors reported that there were no formal or even informal procedures for recognizing good instructor performance. There were no "instructor of the month" awards, or letters of commendation presented periodically. According to many instructors, the only reward they got from being an instructor was whatever personal satisfaction they could derive from helping students.

The foregoing statements express quite negative feelings. However, a number of instructors expressed no special complaints about the BAAC course.

The instructors' comments suggest that they are most interested in believing that they are part of a worthwhile instructional enterprise, which is also viewed by others as being worthwhile. Their comments suggest that periodically publicizing the course would have a salutary impact on their attitudes toward the course.

If the BAAC course instructor cadre was restructured, the importance of these specialist positions might be obvious to all concerned with the course—school administrators, students, and instructors. In addition, special training could be given to those who were selected to function as specialists in the course. The mere fact that special training would be required before one could function in a specialist position should enhance the status of that position.

There are now no formal procedures for promoting BAAC course instructors. This might be accomplished in the following way. All instructors newly assigned to the BAAC course could begin as classroom monitors/training record keepers, a rather low-skilled job position that should be learned quite readily. Those persons who evidence superior capability as monitors, mastered or showed a desire to master the course content, and expressed an interest in advancing as an instructor, could be given the opportunity to compete for assignments to a course specialty position—diagnostic

counselor, academic counselor, reviewer/remedial training instructor, or EOC test administrator.

Those selected for one of these positions could be given additional training. After performing acceptably on the job for a month or so, they might receive promotions. This type of promotion should serve as an incentive for most junior instructors. Assuming that some senior instructors would be reassigned every one or two years, there should be a continual number of vacant instructor specialty positions into which junior instructors could be promoted.

INSTRUCTOR TRAINING REQUIREMENTS

There is a common but erroneous belief that instructors for a PI course need little, if any, training. A course such as the BAAC course needs a fairly large number of instructors who know how to administer the course and maintain course records; however, they need not be content experts. The BAAC course (and most other PI courses) also need small numbers of content experts who can function as academic counselors, diagnostic counselors, and tutors.

According to comments provided by BAAC course instructors, most instructors received training regarding course administration and record keeping. However, few were trained to counsel students or provide academic assistance. The authors of this report believe that the training of BAAC course instructors should receive considerable emphasis. Instructor training is a critical part of every PI course, in some instances more critical than for more traditional courses. The training of BAAC course instructors might proceed in accordance with the following suggestions:

(1) All instructors, but especially classroom monitors, would be trained to maintain course records and classroom decorum, and to direct students to other instructor specialists as appropriate.

(2) Diagnostic counselors would receive special training on how to counsel students who are having academic difficulty. In particular, these counselors should be taught how to identify both academic and personal problems and how to motivate slow learners. They might also be taught how to identify early in the course those students who are potential course dropouts.

(3) Academic counselors would receive special training on how to identify the academic problems of slow learners and how to provide tutorial assistance. Of course, academic counselors would be expected to be course content experts.

(4) Reviewers/remedial training instructors and EOC test administrators should receive training appropriate to their job positions.

(5) It would seem appropriate to examine existing Methods of Instruction (MOI) courses with a view to determine how they might be restructured so as to present specific blocks of material on student counseling and tutoring. These instructor activities occur in traditional as well as in PI courses. As more AIT courses employ PI material or some form of self-instructional material, MOI courses should be reoriented from platform instruction techniques to those techniques employed with self-instructional courses. If this is not feasible, special MOI courses might be presented by the course proponent (the Adjutant General School in the case of the BAAC course).

INTERMIXING PI TEXTS AND PLATFORM INSTRUCTION

Is there a place for platform instruction in a course presented by PI material? The answer is a resounding "Yes," according to the instructors interviewed during this study. BAAC course instructors believe that many portions of the course can be better presented by platform instruction. In particular, they suggested that platform instruction should be used to introduce the course. Also, some instructors suggested that a form of class review might be conducted following the study of a set of PIs.

The BAAC course contains some PIs which are quite difficult for many students. By monitoring the time it takes each student to study a PI, and the number of errors made on the EOC test associated with that PI, it is possible to identify rather precisely those PIs which are in need of improvement. New PI material could then be prepared. An alternative procedure, one commonly suggested by the instructors, would be to present certain PI material by the lecture method.

It may be that certain portions of the BAAC course are in constant need of being updated because of changes in regulations covered during certain portions of the course. If this is so, then it would be appropriate to teach those portions of the course by platform instruction. After considering the suggestions and comments provided by the instructors, it appears that the following possibilities exist for intermixing PI material with platform instruction.

(1) For a fixed-length course, each PI might be introduced by a short lecture. Then the students could study PI material for a certain number of hours. Additional PI material could be made available for study by "fast learners." Following a set period of time, a review session could be held for the entire class.

(2) For a variable-length course, platform and programmed instruction might be intermixed as follows:

(a) Video-tape lecture material might be prepared to introduce each PI. Such material could be prepared locally by a senior school instructor. Video cassettes or a dial access system might be used to present the material individually to each student.

(b) Each student would study a standard set of PI material in a standard sequence. This could be followed by the study of locally produced video-tape material which reviewed the lesson material and presented criterion test items. If desired, the criterion test items could be scored by the student. This might be followed by a review of each test item (a video-tape review) which then could be followed by the presentation of a second criterion test scored by the instructor.

STUDENT COUNSELING PROCEDURES

A large minority of BAAC course students receive counseling during the first week or two of the course. This the time to identify students having difficulty, according to study findings. During these counseling sessions, an instructor suggests a course of action for correcting academic problems and tries to determine their source. It has already been suggested that specially trained diagnostic counselors should be used to perform this function. What follows now are a few suggestions for how BAAC course student counseling procedures might be improved:

(1) All slow learners should receive counseling at least by the end of the first week of instruction.

(2) The possibility of reassigning a slow learner to another MOS-producing course should be discussed as a positive feature of reclassifying enlisted personnel. Currently, this possibility seems to be used as a threat which may motivate the BAAC course student to improve his academic performance.

(3) A clear-cut counseling and student drop policy should be formulated and communicated to all students during the first day or two of the course.

(4) Very slow learners, especially those assigned to group typing, should be dropped from the course after the first week if they cannot type at some specific rate—at least 7 or 8 NWPM.

(5) Students who are obviously not motivated and/or claim that they were misassigned, or now claim that they do not wish to become clerk-typists ought to be dropped from the course as soon as possible.

CONCLUDING COMMENTS

The BAAC course is another example of a well-designed course suffering from lack of adaptation to a changing environment. Current weaknesses of the course are not inherent to a self-paced, variable-length course of instruction. Rather, they seem to stem from the widely held but *deceptive* belief that, once implemented, a PI course does not have to be too closely monitored. Our analysis demonstrated that this type of course must be closely monitored. If it is not, the administrative procedures of the course deteriorate and the course content becomes obsolete.

Each person who participates in the development or conduct of the BAAC course bears some responsibility for maintaining the quality of the course and for identifying those portions of the course which are in need of improvement. We suggest that at both Fort Ord and Fort Jackson there be established quality control procedures designed to periodically review the BAAC course, to gather information from the various persons associated with the course, and to develop suggestions for how the course can be improved at the School level. Similar quality control procedures might be established at the Course Proponent level.

At least on a yearly basis, representatives of an AIT School and a Course Proponent might meet for the purpose of reviewing how their respective contributions to a particular course could be improved.

Mutual cooperation between School and Course Proponent is of special importance to PI courses because typically the instructional material is developed and updated by the Course Proponent and then presented by the School. Without close cooperation, such courses can easily become problem courses.

Suggestions for the BAAC course may be summarized as follows:

(1) A unit of instruction could be developed for teaching students how to update PI course material, or portions thereof. The content of such a unit might cover procedures for posting changes to and/or substituting new for obsolete material for official Army publications and for PI instructional material.

(2) "Rate of performance curves" could be developed which would indicate to students what is expected of them. These curves could be used by students to monitor their own progress during the course.

(3) CL scores could continue to be the basis for allowing a person to enter the BAAC course. However, students who cannot type at the rate of 5 NWPM by the end of the fifth day of the course could be considered for reclassification.

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(4) At the end of the fifth day of the course, students could be assigned to an instructional track on the basis of CL score and typing speed. Academic rewards received during the remainder of the course could be based on a student's ability to exceed the expected rate of performance for members of his instructional track.

(5) To improve the incentive system for BAAC students, the School and the Training Companies could agree to allow students who have been awarded a pass by the School to use that pass immediately.

(6) Procedures for feeding back EOC test results to students and instructors could be improved by preparing material describing what portions of a PI a student should study if he failed a particular test item. Also, a checklist could be employed by EOC test administrators to indicate those test items missed by the student.

(7) The instructor cadre of the BAAC course might be reorganized so as to recognize the need for various types of instructor specialists.

(8) Instructors newly assigned to the BAAC course could begin as classroom monitors and training record keepers. Those persons who evidenced superior capability, interest in the course, mastery of course content, and so on, could be given the opportunity to compete for assignment to one of the course specialty positions. This could be accompanied by further training and a promotion.

(9) It seems appropriate to intermix PI material with platform instruction. The following options merit consideration:

  (a) For a fixed-length course, each PI might be introduced by a short lecture. The students could then study PI material for a certain number of hours. Additional PI material could be made available for study by "fast learners." Following a set period of time, a review session could be held for the entire class.

  (b) For a variable-length course, platform and programmed instruction might be intermixed as follows:

    1. Video-tape lecture material might be prepared to introduce each PI. Such material could be prepared locally by a senior school instructor. Video cassettes or a dial access system might be used to present the material individually to each student.

    2. Each student would study a standard set of PI material in a standard sequence. This could be followed by the study of locally produced video-tape material which reviewed the lesson material and presented criterion test items. If desired, the criterion test items could be scored by the student; this might be followed by a video-tape review of each test item. This could be followed by the presentation of a second instructor-scored criterion test.

(10) To improve student counseling procedures, a particular effort could be made to counsel all students with personal or academic difficulties. Students who appear to be potential course dropouts should be considered for reclassification.